DOCUMENT RESUME

ED 469 282 EC 309 208

AUTHOR	Deshler, Donald D.; Grossen, Bonnie; Marquis, Janet; Schumaker, Jean B.; Bulgren, Janis A.; Lenz, B. Keith; Davis, Betsy
TITLE	The Educational Context and Outcomes for High School Students with Disabilities: The Characteristics and Perceptions of Students with Disabilities. Research Report.
INSTITUTION	Kansas Univ., Lawrence. Inst. for Academic Access.
SPONS AGENCY	Special Education Programs (ED/OSERS), Washington, DC.
REPORT NO	RR-2
PUB DATE	2002-00-00
NOTE	26p.
CONTRACT	84.324S
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; *Disabilities; Educational Assessment; Educational Environment; Environmental Influences; Grade Point Average; Grades (Scholastic); High Schools; Inclusive Schools; *Outcomes of Education; Racial Composition; Racial Differences; Secondary Education; Sex Differences; Special Classes; Student Attitudes; *Student Characteristics; *Student Participation; *Student Placement; Teacher Attitudes

ABSTRACT

This report discusses the findings of a study that gathered descriptive information in the areas of salient student characteristics (e.g., gender, ethnicity, poverty, disability classification), level of participation in general education classes, current level of functioning, student outcomes (e.g., grade point average, performance on state or national exams), and satisfaction level of students with disabilities with their high school experiences. The study was conducted in nine public high schools. Three types of high schools were represented: urban, suburban, and rural in four states (Kansas, Washington, Oregon, and California). Data indicate 61% of the students with disabilities in the study were male, nearly 35% were minority students, and in rigorous core high school courses, 56% of the students with disabilities achieved grade point averages of D or F. On state or national achievement tests, the vast majority of students with disabilities received scores at or below the 20th percentile. One of the most significant findings in the study indicates students with disabilities were enrolled in only about 3.7% of potential core courses (i.e., rigorous general education classes) in which they could have been enrolled. (Contains 17 references.) (Author/CR)

Reproductions supplied by EDRS are the best that can be made

ED 469 282

Institute for Academic Access

Research Report #2

The educational context and outcomes for high school students with disabilities: The characteristics and perceptions of students with disabilities

Donald D. Deshler, Bonnie Grossen, Janet Marquis,
Jean B. Schumaker, Janis A. Bulgren,
B. Keith Lenz, and Betsy Davis

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

2002

EC 309208

IDEAs that Work
U.S. Office of Special Education Programs

Sponsored by the U.S. Department of Education, Office of Special Education Programs Grant # 84.324S

BEST COPY AVAILABLE

Abstract

The purpose of this study was to gather descriptive information in the areas of salient student characteristics (e.g., gender, ethnicity, poverty, disability classification), level of participation in general education classes, current level of functioning, student outcomes (e.g., GPAs, performance on state or national exams), and student satisfaction with their high school experiences for students with disabilities (SWDs) in high school settings. These data were seen as being helpful in the eventual design of interventions to enhance student performance.

The study was conducted in nine public high schools serving grades 9 through 12. Three types of high schools were represented in the study: urban, rural, and suburban from the states of Kansas, Washington, Oregon, and California. 61% of the SWDs in this study were male, nearly 35% of the SWDs were minority students, and in rigorous core high school courses, 56% of the SWDs achieved GPAs of D or F. On state or national achievement tests, the vast majority of SWDs (86 – 100%) received scores at or below the 20th percentile. One of the most significant findings in this study is the fact that the SWDs were enrolled in only about 3.7% of the potential core course (i.e., rigorous general education classes) in which they could have been enrolled. Overall these data underscore that current performance and practice for adolescents with disabilities in high school settings are falling far short of meeting the expectations set forth in IDEA of having access to and succeeding in the general education curriculum.

In America, literacy is an expected and required outcome of schooling. Regrettably, nearly 13 million public high-school students possess literacy skills well below grade level (U.S.D.E, 1999). Many of these adolescents are incapable of reading road signs, newspapers, or bus schedules, let alone high-school textbooks, technical manuals, or basic directions on the job. Included in the ranks of these illiterate adolescents are many students with disabilities who, according to IDEA 1997, are to have access to and benefit from rigorous general education curricula that will lead to standard high school diplomas and success on state outcome assessments (Nolet & McLaughlin, 2000).

Because so many adolescents with disabilities experience difficulty attaining the academic and social competencies required for successful participation in rigorous general education curricula, educators need to have an increased understanding of the factors related to the failure experienced by these students. The most notable and discouraging index of the failure encountered by adolescents with disabilities is the fact that an average of 38% of these students drop out of school compared to 25% of their peers without disabilities (Wagner, Blackorby, & Hebbeler, 1993). As a result, they face the real possibility of being undereducated, underemployed, and ultimately underprepared to successfully participate in the mainstream of society in the twenty-first century (Sitlington & Frank, 1990).

Making sound programming decisions on behalf of students with disabilities is also dependent on having a thorough understanding of the attributes of the students in terms of their defining characteristics, including how they are currently performing (Kleinhammer-Trammill & Gallagher, 2001). In the absence of this information, programming decisions for students may be inaccurate or inappropriate (Shinn & Hubbard, 1992). Because of the shortness of instructional time available to teach adolescents with disabilities, an accurate profile of the factors that characterize these students as learners is crucial, so programs can best be matched to meet their unique needs (Schumaker & Deshler, 1988). Additionally, given the pressing expectation for students with disabilities to perform well on statewide assessments, educators need to understand the degree to which their current performance is at variance with acceptable levels of performance. This knowledge can be used to guide educational programming and decision-making (Mercer, Lane, Jordan, Allsop, & Eisele, 1996).

One of the most important contributions to the professional literature on the characteristics and performance of adolescents with disabilities during the past decade has been the National Longitudinal Transition Study (NLTS) (Wagner, Blackorby, & Hebbeler, 1993). This comprehensive investigation detailed some critical data and trends relative to students with disabilities. Among some of the findings that emerged from this study were the following: (a) students with disabilities were more likely than students in the general population to experience

poverty and related factors; (b) although academic courses dominated their high school programs, most students with disabilities also had some vocational education; (c) inclusion in general education courses was a fact of life for most students with disabilities in regular high schools; (d) a sizable minority of students with disabilities had markedly poor school performance; and (e) a disproportionate share of students with disabilities dropped out of school.

The NLTS was conducted from 1987 through 1993. However, much has happened relative to legislative initiatives (e.g., the reauthorization of IDEA in 1997 which underscored the importance of access to the general education curriculum and attention to student outcomes [Goertz, McLaughlin, Roach, & Raber, 2000]; the passage of the No Child Left Behind Act that calls for all students being taught with educational practices that are scientifically based) and prevailing conditions in today's schools (e.g., all states have curriculum standards, 48 states have adopted their own system of statewide assessments [Council of Chief State School Officers, 1998], and 18 of these states have adopted a high-stakes assessment policy basing student promotion and/or graduation solely on students' performance on the state assessment [Olson, 2000]). In light of these significant changes brought about by legislative and other forces, some of the key findings from the NLST study need to be confirmed, and other measures need to be gathered that reflect the status of services and the performance of adolescents with disabilities in high schools.

Therefore, the purpose of this study was to gather descriptive information in the areas of salient student characteristics (e.g., gender, ethnicity, poverty, disability classification), level of participation in general education classes, current level of functioning, student outcomes (e.g., GPAs, performance on state or national exams), and student satisfaction with their high school experiences. These data were seen as being helpful in the eventual design of interventions to enhance student performance.

Methods

Settings

Nine public high schools serving grades 9 through 12 participated. Three types of high schools participated. Three (hereafter referred to as "urban high schools") represented schools located in high-density areas (i.e., urban/metropolitan areas populated by more than 150,000 people) and in which more than 50% of the student population is comprised of "students living in poverty." "Students living in poverty" were defined for the purposes of this study as students who had applied for and received free or reduced-cost lunch benefits. Three of the high schools (hereafter referred to as "rural high schools") represented schools located in low-density population areas (i.e., towns of fewer than 10,000 people and fewer than 150 people per square mile) and in which more than 10% of the student population was comprised of students living in poverty. Three of the high schools (hereafter referred to as "suburban high schools") represented

schools that were located in towns having a population of more than 45,000 people and fewer than 150,000 people and in which fewer than 10% of the student population was comprised of students living in poverty.

Three of the high schools (one urban, one rural, and one suburban) were located in Kansas. Three of the high schools (one urban, one rural, and one suburban) were located in the state of Washington. Two schools (one rural, one urban) were located in California. One school (suburban) was located in Oregon.

The student populations in the urban schools ranged in size from 1,031 to 3,508 students, while in the rural schools the populations ranged in size from 330 to 693 students. The student populations in the suburban schools ranged in size from 931 to 1,691 students.

The percentage of students with disabilities in the nine schools ranged from 3.9% in a suburban school to 14.8% in an urban school. Six of the schools had Caucasian majorities, ranging from 67% to 95% of the student population. One school had a Latino/Hispanic majority; one school had an African-American majority; and one had an Armenian majority.

A rigorous general education course was defined as a math, English, social studies/history, science, or foreign language course that a student must pass in order to earn a standard high-school diploma, that contributes credits toward a standard high-school diploma (as in the case of a foreign language course), that has been designed for helping students meet state standards, and that was being taught by a teacher who has credentials in the subject area.

Subjects

Students. The students with disabilities (SWDs) targeted in this project were students who had been formally classified as having a disability (e.g., a learning disability, emotional disorder/disturbance, behavioral disorder, physical disability, visual disability, hearing disability, or other health impairment) according to state guidelines. In addition, they were students who had either been enrolled in one or more rigorous general education courses as defined above or who were judged by their special education teachers as students who could successfully have been enrolled in one or more rigorous general education course successfully if they had had the appropriate instructional support. These were students who were expected to earn standard high-school diplomas by their special education teachers. Hereafter, this will be the only type of student with disabilities referred to in this report.

In some of the participating schools, "at-risk students" participated. "At-risk (AR) students" were students who had each earned more than one failing grade in a required course in a previous semester or who were already failing at least one rigorous general education course as defined above at the time of the study. In addition, they were also students who had not been formally classified as having a disability.

A third group of students who participated was normally achieving (NA) students. These were students who were enrolled in the same ninth-grade English classes as participating students with disabilities and who were earning at least a "C" grade in those course.

All students and their parents were informed about the purpose and procedures of the investigation and asked to sign informed consent forms indicating their willingness to participate or their permission for their child to participate.

A total of 513 students were involved in different aspects of this study – 150 were students with disabilities (SWDs), 280 were normally-achieving students (NAs), and 197 were at-risk students (ARs). 145 SWDs completed the Student Survey, 100 SWDs completed the Student Satisfaction Form, 149 SWDs were administered the MAST, and 102 SWDs were administered the Vocabulary subtest of the WISC III or the WAIS III (see Measurement section below for a description of the measures). 252 NAs completed the Student Survey, 217 NAs completed the Student Satisfaction Form. 197 ARs were administered the MAST.

Measurement

Measurement instruments were initially constructed based on the research questions to be addressed in the investigation. Then, an Advisory Board, comprised of experts in secondary education and special education, reviewed drafts of the instruments and provided input. In addition, Drs. Janet Marquis and Nona Tollefson, experts in the fields of measurement and statistical analysis, reviewed the instruments. Revisions were made in the instruments in response to the experts' feedback. Each survey instrument was piloted with 3-4 individuals to determine the time required for administration and to identify any confusing items.

Student instruments. Students completed three forms. The first form, called the **Student Demographics Form**, was used to gather personal information about the participating students such as their age, race, sex, and whether they receive free or reduced-price lunches at school. There were 11 items on the form. Students responded by filling in the blank on about half of the items and by indicating the best answer among several answers for the other half of the items.

On the **Student Survey**, students indicated, using a 7-point Likert-type scale, how much they agreed or disagreed with each item. Items related to their attitudes about learning (e.g., "I don't want to do the hard work in a challenging class."); academic skills (e.g., "For the things that I am asked to do in my high school classes, I feel that I have good skills to be successful."); beliefs (e.g., "I believe I can get better as a learner."); and relationships with adults and students in the school (e.g., "I have a close relationship with at least one adult in this school."). There was a total of 37 items on the survey. The survey was administered to SWDs and NA students.

On the third form, called the **Student Satisfaction Form**, students rated their satisfaction using a 7-point Likert-type scale for each item with "1" indicating that they were "Completely Dissatisfied" and "7" indicating that they were "Completely Satisfied." Two forms

of this questionnaire were used, one for SWDs and one for normally achieving students. The items on the Student Satisfaction Form for SWDs related to their satisfaction with how their special education teachers help them succeed in general education classes, how their special education teachers and parents communicate, how their special education teachers are preparing them for life after high-school graduation, how the teachers of their required academic courses help them learn, their comfort with and outcomes associated with those academic courses, and their overall high school experience. They were also asked to list three skills that they have learned in high school that have been very useful in succeeding in required courses, and three things they need to learn to get better grades in required courses.

The items on the Student Satisfaction Form for normally achieving students were the same as the items on the Satisfaction Form for SWDs except the wording was changed slightly. For example, the SWDs were asked to indicate how satisfied they were with how the *special education teacher* was helping them complete assignments for required courses, whereas the typically achieving students were asked to indicate how satisfied they were with how the teachers of their required academic classes were helping them complete assignments for required courses.

Students with disabilities were administered two tests. **The Multilevel Academic Survey Test (MAST)** was administered in order to provide a standard measure of student achievement across students with disabilities in the different participating schools. The MAST was also administered to AR students in two of the schools. This test yields achievement scores in reading and math. Percentile scores and grade-level achievement scores were utilized to describe the students. Additionally, the **Vocabulary subtest of the *WAIS-III*** (or the WISC-R, as appropriate for age) was administered in order to obtain a measure of student ability across students with disabilities in the different schools. Raw scores were utilized from this test to describe the students.

Finally, data related to the participating students were gathered from school records using a form called the **Student Information Form**. Two versions of the form were created, one for the SWDs and one for the normally achieving students. The form was used to gather standardized test scores, the names of classes in which the student was enrolled, the semester grades earned by the student, the number of days the student was absent, suspended, or expelled, the number of disciplinary actions incurred during each year of high school, and scores on state competency exams. The only difference between the version for the SWDs and the normally achieving students was that there was a place on the version for the SWDs to record the scores earned on individually administered achievement and aptitude tests and information about the students' disabilities.

Other instruments. The **Types of Classes Form** was used to gather information about the types of classes in which the students with disabilities were enrolled. The form consisted of five pages, each corresponding to a different type of class: (a) classes taken for general education credit that were taught by a special educator (Type A); (b) classes taken for general education credit in which only low-achieving students and students with disabilities were enrolled that were taught by a general education teacher (Type B); (c) rigorous general education classes taught by a general education teacher and in which a heterogeneous population of students was enrolled (Type C); advanced placement classes (Type D); and other classes (e.g., electives such as physical education, art, band) (Type E). On each page were spaces where the teacher could specify the name of the course, the name of the teacher teaching the course, and the number of students with disabilities enrolled in the course.

Procedures

A staff member in each high school volunteered to be the liaison person for the investigation. This person introduced researchers to key people throughout the school, scheduled meetings, and generally assisted researchers in making the necessary arrangements to collect data. As a part of the process of obtaining informed consent from the students and their parents, the types of data to be collected and what would be required of the students was explained to them. To collect information on the Student Survey, Student Satisfaction Form, and Student Demographic Form, research assistants met individually with students during a study hall, resource room period, or at another time convenient for the student that was least disruptive to his or her class schedule. The meeting location was in an area that provided as much privacy for the student as possible and that was conducive to one-on-one interaction with the research assistant.

Prior to beginning data collection, the research assistant explained to the students that a study was being conducted to determine how adolescents learn and the kinds of instructional conditions that work best for them in order to eventually determine how to design more effective instructional practices. Students were given an opportunity to ask any questions that they had for clarification. Each student was paid fee of $25 for participating in this study. Data on the Student Survey, Student Satisfaction Form, and the Student Demographic Form were generally collected within the span of one class period.

The MAST was group administered in either an English or math class to the entire class of students or, in the case of some of the SWDs, in a resource room/special education classroom. The Vocabulary Subtest of the WISC III or the WAIS III was individually administered to students at the time that information on the other student forms described above was collected.

Research assistants made arrangements with office personnel within each high school to gain access to student records to collect the information on the Student Information Form. Data

on course schedules, standardized test scores (e.g., state assessments or national achievement test scores), grade-point averages, and attendance were collected and recorded on a separate Student Information Form for each student. In some cases, school policy did not permit researchers to have access to these records. In those instances, school personnel completed the Student Information Form for each participating student.

Results

Student Demographic Results

The SWDs in this study were markedly different than students in the NA/AR group in terms of gender, ethnicity, and poverty. Specifically, 61% of the SWDs were males versus 47% males in the NA/AR group. For the SWD group, 22.1% were Hispanic/Latino, and 13.3% were African-American. In the NA/AR group, only 9.5% were African-American, and 1% were Hispanic/Latino.

Reports of free and reduced lunch programs for SWDs indicated that 19.47% received free lunches (versus 3.48% for the NA/AR students) and 6.19% received reduced lunch prices (versus 3.48% for NA/AR).

Relative to special education category, 66.37% of the SWDs were classified as LD, 3.54% were classified as BD, 1.77% were classified as MR, 1.77% were classified as TMR, and 15.92 were classified either having a sensory disability, other health impaired, or having a multiple diagnosis. About 11% did not have a formal special education categorical designation even though they were receiving special education services.

Level of Participation in General Education Classes Results

Searches of school records revealed that, overall, a very small percentage of SWDs participate in rigorous general education courses in which a heterogeneous population of students is enrolled and which are taught by general education teachers. Table 1 depicts the total number of SWDs enrolled in each site, the possible rigorous enrollments in general education classes (this number was determined by multiplying the number of special education students by four courses – assuming each student should be enrolled in a minimum of four core courses), and the actual number of enrollments at each site. The number of actual enrollments in rigorous general education courses varies widely across the schools, depending on the model of educational programming adopted by the school. For example, in Suburban School #2 and Rural School #2, the majority of students are enrolled in rigorous core courses. In other schools, very few actual enrollments in these types of courses had occurred.

When general education teachers were asked to estimate the number of SWDs in their classes, they estimate nearly twice as many SWDs to be in their classes as there were in reality (218 were estimated versus 130 actual cases). In all but two teachers' cases, they dramatically over estimated the number of SWDs in their classes.

Current Level of Functioning Results

Tables 2 and 3 show the academic achievement of SWDs and AR students on reading comprehension and mathematics as measured by the Multilevel Academic Survey Test (MAST).* For both SWDs and AR students, the scores are very low. Specifically, for SWDs, the average raw score for reading comprehension was 29.3 (2nd percentile) and the mean raw score for math was 12.2 (1st percentile). Interestingly, the scores earned by the AR students were nearly identical to those earned by the SWDs, with only slightly higher mean raw scores (33.5 and 13.2 respectfully); however, their performances also placed them in the 3rd percentile in reading and the 1st percentile in math.

The Vocabulary subtest of the WISC III (or WAIS III depending on age) was given to SWDs as measure of ability. The average scale score for the 76 students tested with the WISC was 8, with a range of 6 to 9. A scale score of 8 is equivalent to performance in the 25th percentile and an IQ of approximately 90. The average scale score for the 26 students taking the WAIS III was 7, with a range of 6 to 9. No ability measure was administered to the NA and AR groups.

Student Outcomes Results

Table 4 shows that SWDs performed considerably poorer than their NA counterparts in their coursework as reflected by grade-point averages (GPAs). Specifically, in core courses, 51.3% of the SWDs achieved GPAs of D or F, and 44% received GPAs of C. Thus, even though the majority of students are not enrolled in rigorous general education courses, they are still doing poorly in the courses in which they are enrolled. In contrast, only 22.4% of the NA group received GPAs of D or F, and 46.6% received GPAs of C. Only 4.6% of the SWDs received grades of B or A, whereas 31% of the NA group had GPAs in the B or A range.

Table 5 contains a summary of the performance of SWDs and NAs on state assessments and national tests (e.g., the Metropolitan Achievement Test or the Iowa Test of Basic Skills); the data reveal that SWDs performed markedly poorer than NA students. The percentage of SWDs receiving a score at or below the 20th percentile for reading achievement ranged from 86% to 100% across the participating schools. For math achievement, between 68% and 100% of SWDs scored at or below the 20th percentile, and for written expression, all of the SWDs scored at or below the 20th percentile. In contrast, the percentage of the NA students scoring at or below the 20th percentile was less than half of the percentage of SWDs scoring at or below that level in each school.

---

* Because of logistical reasons, schools were not willing to give permission to collect MAST data on NA students. Only in two of the schools (Urban #1 and Urban #3) were principals willing to allow this testing to take place with AR students. They were interested in the test results for programming purposes. The classes in which the tests were administered were classes that contained only AR students.

Student Survey Results

The 37-item Student Survey indicated no discernable differences between the two groups on measures related to attitudes about learning, self-assessment about skills required to do well in school, and relationships with adults.

Student Satisfaction Results

Figures 1 and 2 summarize the results derived from the Student Satisfaction Form for SWDs and NA students, respectively, according to type of school (i.e., urban, rural, suburban). These figures show the mean ratings provided by the students across items within each of the six sections of the questionnaire. Overall, the satisfaction expressed by the students was moderate with most mean ratings in the 4.5 to 5.5 range on a 7-point scale (with "7.0" representing "completely satisfied"). SWDs attending the suburban schools were generally more satisfied than students attending rural and urban schools. SWDs attending the suburban school where learning strategies were being taught (Suburban School #2) were the most satisfied group. In fact, their mean ratings were above the 6.0 level (the "Satisfied" level) in all of the sections of the questionnaire except one. The level of satisfaction reported by the NA students was comparable to the SWDs' ratings.

Figures 3, 4, and 5 show the summary of the satisfaction results for SWDs in each of the urban, rural, and suburban schools, respectively. Figures 6, 7, and 8 show the summary of results for the NA students in each of the urban, rural, and suburban schools, respectively. These figures indicate that the satisfaction of the students varied somewhat within each type of schools and across sections of the questionnaire. Generally speaking, the level of SWD satisfaction is highest within the suburban schools, but the same level of ratings are not provided by their NA counterparts in the suburban schools. The vast majority of ratings across all sites, groups, and sections of the questionnaire fall below the 6.0 satisfaction threshold.

On this same questionnaire, students were also asked to report on the most useful skills that they have learned in high school. Each group rated English/language arts as the most useful skills and mathematics concepts as the second most useful. The groups were also similar in the degree to which they positively endorsed the usefulness of typing and computer skills. Interestingly, however, the groups were quite different in their ratings of the perceived usefulness of study skills, note taking, and life skills. In all cases, the NA students rated these skills as more useful than did the SWDs. This finding may be related to the results of a study in which high school special education classes were observed and which revealed very little instructional time spent on these skills (Schumaker, Lenz, Bulgren, Davis, Grossen, Marquis, & Deshler, 2002).

Discussion

The results of this descriptive study show that only a very small handful of all SWDs are participating in rigorous general education classes in the participating high schools. The vast

majority of SWDs are placed in subject-area classes taught by special education teachers (Type A Classes) or general education classes that contain only low-achieving students (Type B Classes). There are several concerns related to this finding. First, this placement pattern is clearly at variance with the spirit and intent of IDEA in which SWDs are expected to be placed in instructional arrangements that afford them authentic access to the general education curriculum. Any placement other than attending heterogeneous classes taught by a fully certified (in the appropriate content area) general education teacher is less than ideal. Second, when SWDs are placed in classes that contain only at-risk and other low-achieving students, the level of expectations is generally lower, and the amount of content covered is less than what is typically taught in rigorous classes (Bartholomay, Wallace, & Mason, 2001). Third, typically, special education teacher s are not certified to teach content-area subjects; hence, SWDs in these classes receive lower quality educations (Skrtic & Brownell, 2002). Finally, in light of the clear trend and expectation for all students to meet standards-based outcome standards, the current trend of not including SWDs in rigorous general education classes is setting these students up for almost sure failure.

The finding that general education teachers estimated that nearly twice as many students in their classes were students with disabilities is troubling because it suggests these teachers may not be meaningfully involved in the entire IEP process. If they were, they would know which students were classified as needing special education services and which students were not. This is consistent with other findings that suggest that adolescents with disabilities in high school settings are often disconnected from their teachers and often "unknown" by them (e.g., Adams, Lenz, Larauz, Graner, & Pouliot, 2002).

The demographic data collected in this study clearly support an existing trend that has existed in the field of special education for decades, namely that students from minority backgrounds and those who are poor are disproportionately classified as having a disability (Artiles & Trent, 1994; Artiles & Zamora-Duran, 1997; U.S.D.E., 2001). This is cause for concern because of the fact that factors other than learning dysfunction may be at the root of the decision-making process that leads to these classification outcomes.

The fact that SWDs have significantly lower GPAs than their NA/AR counterparts, even though the vast majority of these NA/AR students are in low-track classes or classes taught by special education teachers may account, in part, for the fact that there is such a high drop-out rate among the SWD students. That is, such course placements are often deemed to be boring and unchallenging by students (Lipsky & Gartner, 1997) and when they receive poor grades in these courses, their feelings of hopelessness might increase while the perceived value of the educational experience they are receiving might decrease. The cumulative effects of these factors may lead students to leave school for what they believe will be a more attractive alternative.

The dismal performance of SWDs on national achievement exams and statewide assessments is a very troubling trend. Increasingly, performance on such exams is being used as a benchmark for exiting a system or gaining access to future educational or job opportunities. Currently, 18 states have high-stakes testing requirements and there are indications that this number will grow (Council of Chief State School Officers, 1998). If this happens, SWDs will fall further behind their peers and will be unable to successfully complete high school requirements or be in a position to enter attractive post-secondary opportunities.

While the overall satisfaction of SWDs with their educational programs is somewhat satisfactory, it is troubling that only in one type of school (suburban) do SWDs reach the pre-established threshold "satisfied" rating score of 6.0. This overall picture is indicative that steps must be taken to improve the fundamental quality of the educational experiences in which these students are participatingsuch that their perceptions of the quality and meaningfulness of their educational experience is positive.

Of particular note, was the very low performance of the SWDs on the reading and math subtests of the MAST (in the 1st-3rd percentile range). These data are at variance with the results of a similar study conducted by Warner, Schumaker, Alley, & Deshler (1980) in which they reported that the achievement level of SWDs was in the 10th-12th percentile. The difference in the performance of the students in the two studies may be due to the fact that Warner et al. used an individual achievement measure (the Woodcock-Johnson Psychoeducational Battery) whereas the MAST is a group-administered test. For students with disabilities, their performance may be enhanced under the more favorable conditions of individual test administration (i.e., the examiner ensures that students are focused and attending before reading each item; whereas, under group administration conditions, students must monitor their own behavior). Secondly, the norms on the MAST at the lower end of the scale may not be sufficiently sensitive to slight differences in student performance.

Finally, the data found in this investigation clearly support several of the key findings from the landmark National Longitudinal Transition Study (Wagner, Blackorby, & Hebbeler, 1993). Namely, there is a higher proportion of students from minority and poverty backgrounds in special education, many SWDs took non-academic core courses (such as vocational training), and most SWDs had records of poor academic performance. There is one point of difference between the two investigations. While the NLTS reported that SWDs spend the majority of time in "regular class settings," they did not differentiate the types of regular class placements as was done in this study. The fact that this study found that SWDs are mainly enrolled in Type A and Type B courses is a concern in light of the expectations on students in today's world to perform well on state outcome assessments. Placement in Type A and Type B "regular classes" will, in all probability, not prepare SWDs to be successful on those assessments.

References

Adams, G., Lenz, B.K., Laraux, M., Graner, P., & Pouliot, N. (2002). *The effects of ongoing communication between teachers and adolescents with disabilities.* Lawrence: The University of Kansas Institute for Academic Access.

Artiles, A.J., & Trent, S.C. (1994). Overrepresentation of minority students in special education: A continuing debate. *The Journal of Special Education, 27*, 410-437.

Barholomay, T., Wallace, T., & Mason, D. (2001). *The leadership factor: A key to effective inclusive high schools.* Minneapolis, MN: University of Minnesota Institute on Community Integration.

Council of Chief State School Officers (1998). *State education accountability reports and indicators: Status of reports across states.* Washington, DC.

Goertz, M. E., McLaughlin, M. J., Roach, V. & Rauber, S. M. (2000). What will it take? Including students with disabilities in standards-based education reform. In T. Parrish, J. Chambers, & S. Guarino (Eds.), *Funding special education: Yearbook of the American Education Finance Association* (pp. 40-61).

Kleinhammer-Trammill, J., & Gallagher, K. (2001). Goals 2000 as an inclusive education policy. In W. Sailor (Ed.) *Inclusive education and school/community partnerships.* Baltimore, MD: Paul H. Brooks.

Lipsky, A., & Gartner, A. (1997). *Inclusion and school reform: Transforming America's classrooms.* Baltimore, MD: Paul H. Brooks.

Mercer, C.D., Lane, H.B., Jordan, L., Allsop, D.H., & Eisele, M.R. (1996), Empowering teachers and students with instructional choices in inclusive settings. *Remedial and Special Education, 17*(4), 226-236.

Nolet, V. W., & McLaughlin, M. J. (2000). *Assessing the general curriculum: Including students with disabilities in standards-based reform.* Thousand Oaks, CA: Corwin Press.

Olson, L. (2000). Indiana case focused on special education: Suit challenges high stakes testing. *Education Week, 38*, 1-15.

Schumaker, J. B ., & Deshler, D. D. (1988). Implementing the regular education initiative secondary schools: A different ballgame. *Journal of Learning Disabilities, 21*(1), 36-42.

Shinn, M.R. & Hubbard, D.D. (1992). Curriculum-based measurement and problem-solving assessment: Basic procedures and outcomes. *Focus on Exceptional Children 24*(15), 1-20.

Sitlington, P. L., & Frank, A. R. (1990). Are adolescents with learning disabilities successfully crossing the bridge into adult life? *Learning Disability Quarterly, 13*, 97-111.

Skrtic, T. S., & Brownell, M. (2002). *Assuring an adequate supply of well-qualified teachers to improve the educational outcomes of students with disabilities.* Denver, CO: Presidents Commission on Excellence in Special Education Professional Development Task Force.

U. S. Department of Education (1999). Twenty-first Annual Report to Congress on Implementation of the Individuals with Disabilities Education Act. Washington, DC: USDOE.

Wagner, M., Blackorby, J., & Hebbeler, K. (1993). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities. A report from the National Longitudinal Study of Special Education Students.* Menlo Park, CA: SRI International

Warner, M. M., Schumaker, J. B., Alley, G. R., & Deshler, D. D. (1980). Learning disabled adolescents in the public schools: Are they different from other low achievers? *Exceptional Education Quarterly, 1*(2), 27-35.

Table 1
Rigorous general education enrollments for students with disabilities.

	Rural Schools			Suburban Schools			Urban Schools		
	1R	2R	3R	1S	2S	3S	1U	2U	3U
Total number of special education students	48	14	50	62	76	67	89	180	219
Total possible core class enrollments [1]	192	56	200	248	304	268	356	720	876
Actual number of rigorous general education enrollments	15	49	6	35	304	67	4	166	36
Estimated number of students with disabilities by general education teachers	55	24	N/A[2]	24	17	21	13	51	N/A

[1] This number reflects the number of enrollments possible if every student with a disability were enrolled in a rigorous general education class each class period of the day

[2] N/A = not available.

Table 2
Mean MAST scores for students with disabilities

	No. of students	Mean Raw Reading Score	Reading percentile	Mean Raw Math Score	Math Percentile
Rural #1	10	37	3	15.6	2
Rural #2	8	25.6	1	12.9	1
Rural #3	71	19.9	1	10.7	1
Total Rural	**89**	**27.5**	**1**	**13.1**	**1**
Suburban #2	8	35.6	3	12.1	1
Suburban #3	9	35	3	11.9	1
Total Suburban	**17**	**30.6**	**2**	**12**	**1**
Urban #1	4	33.5	3	11.8	1
Urban #2	15	27.9	1	8.9	1
Urban #3	24	28.3	1	13.6	1
Total Urban	**43**	**29.9**	**2**	**11.4**	**1**
Overall	**149**	**29.3**	**2**	**12.2**	**1**

Table 3
Mean MAST scores for normally achieving/at-risk students

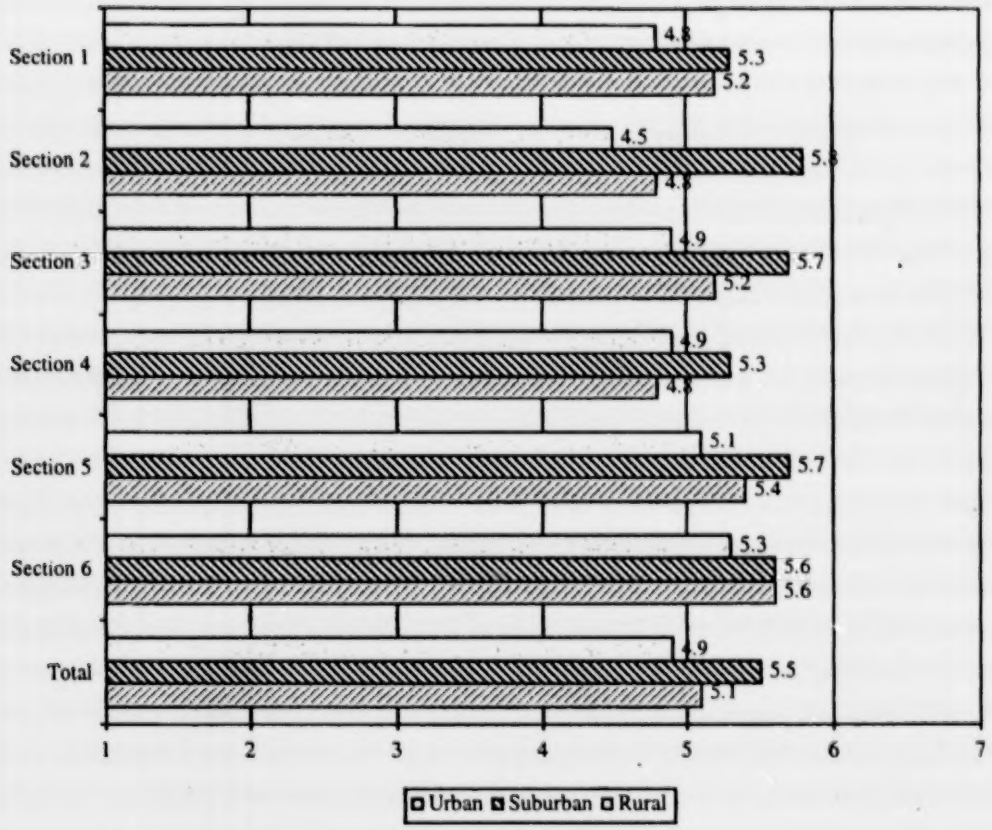
	No. of students	Mean Raw Reading Score	Reading Percentile	Mean Raw Math Score	Math Percentile
Rural #3	155	27.5	1	12.5	1
Urban #1	31	37.7	3	16.4	2
Urban #2	5	35	3	10.6	1
Urban Total	36	36.5	3	13.5	1
Overall	191	33.5	3	13.2	1

Table 4
Grade point averages of students with disabilities and normally achieving /at-risk students

Grade	SWDs	NA/AR
A	0.01%	2.48%
B	4.00%	28.57%
C	44.00%	46.58%
D	37.30%	16.77%
F	14.00%	5.60%

Table 5
State/National Achievement Test Scores at or below the 20th percentile

	SWDs	NA/AR
Reading	86-100%	0-43.75%
Math	68-100%	0-41.67%
Written Expression	100%	0-50.00%



Questions for SWD Satisfaction

Section 1: How satisfied are you with your special education teachers?

Section 2: How satisfied are you with your special education teachers and your parents?

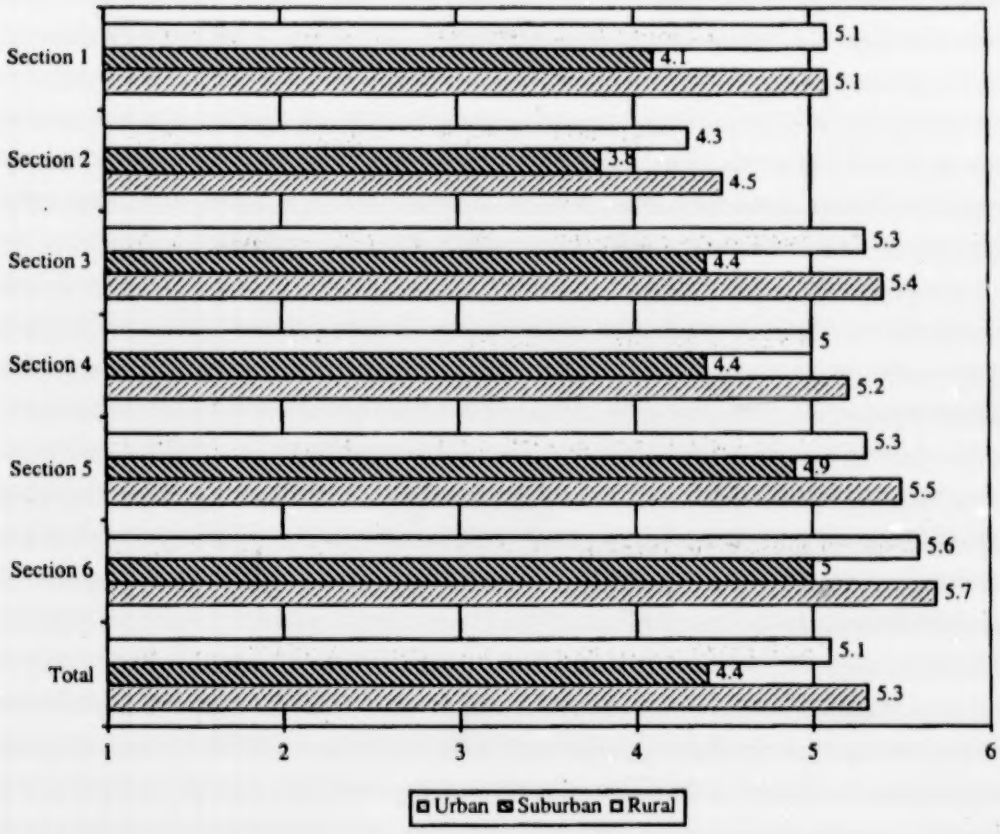
Section 3: How satisfied are you with the way your special education teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the teachers of your required academic classes (science, history, math, English)?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 1. Students with Disabilities Satisfaction Questionnaire by Demographic Region



Questions for NA Satisfaction

Section 1: How satisfied are you with the way your teachers of required academic classes (English, math, science, history) assist you?

Section 2: How satisfied are you with your teachers and your parents?

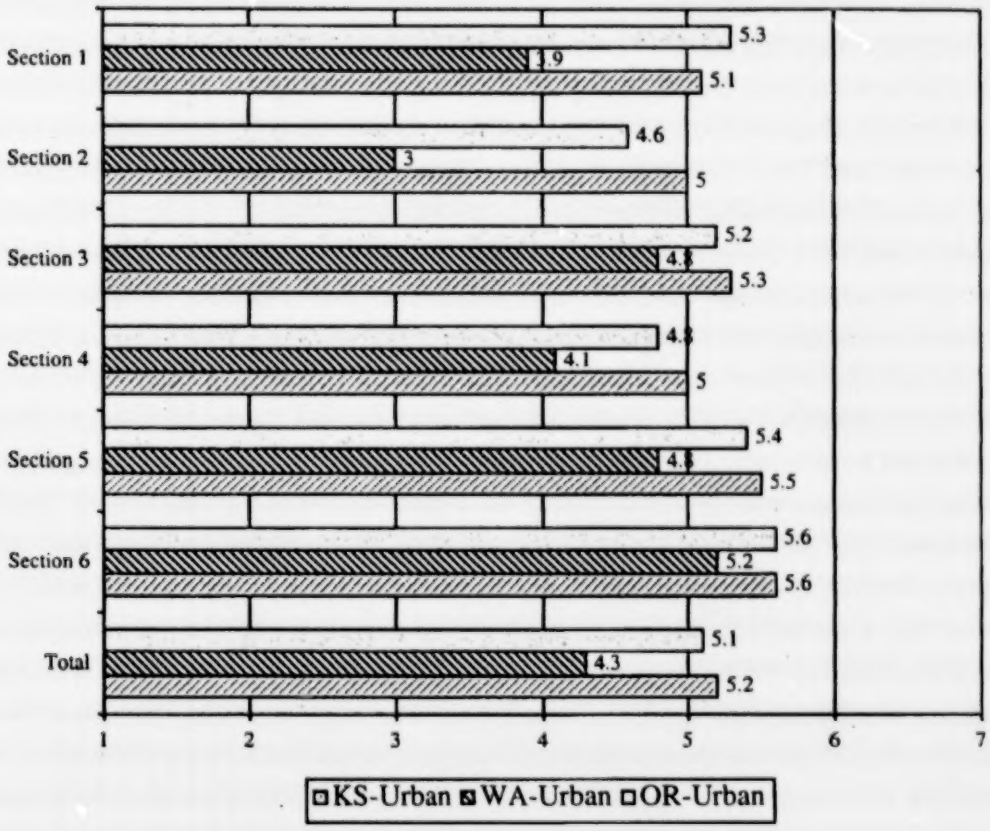
Section 3: How satisfied are you with the way your teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the way the teachers of your required academic classes (science, history, math, English) teach you?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 2. Normal Achieving Student Satisfaction Questionnaire by Demographic Region



Questions for SWD Satisfaction

Section 1: How satisfied are you with your special education teachers?

Section 2: How satisfied are you with your special education teachers and your parents?

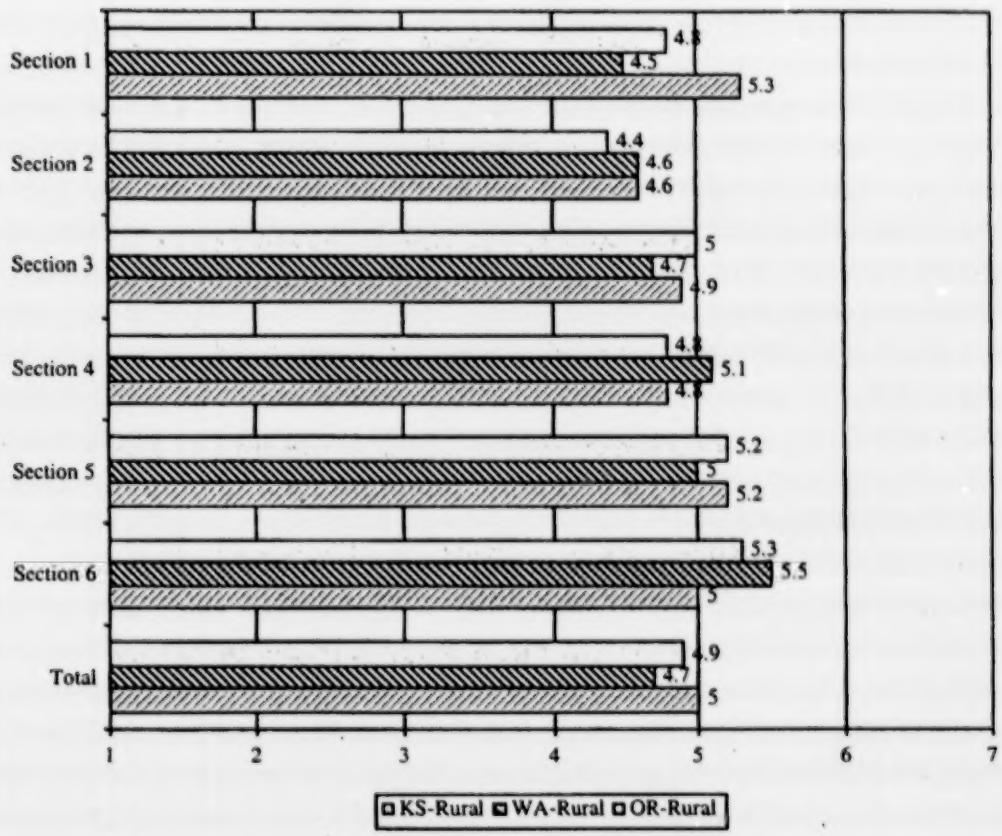
Section 3: How satisfied are you with the way your special education teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the teachers of your required academic classes (science, history, math, English)?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 3. Students with Disabilities Satisfaction Questionnaire for Urban Schools



Questions for SWD Satisfaction

Section 1: How satisfied are you with your special education teachers?

Section 2: How satisfied are you with your special education teachers and your parents?

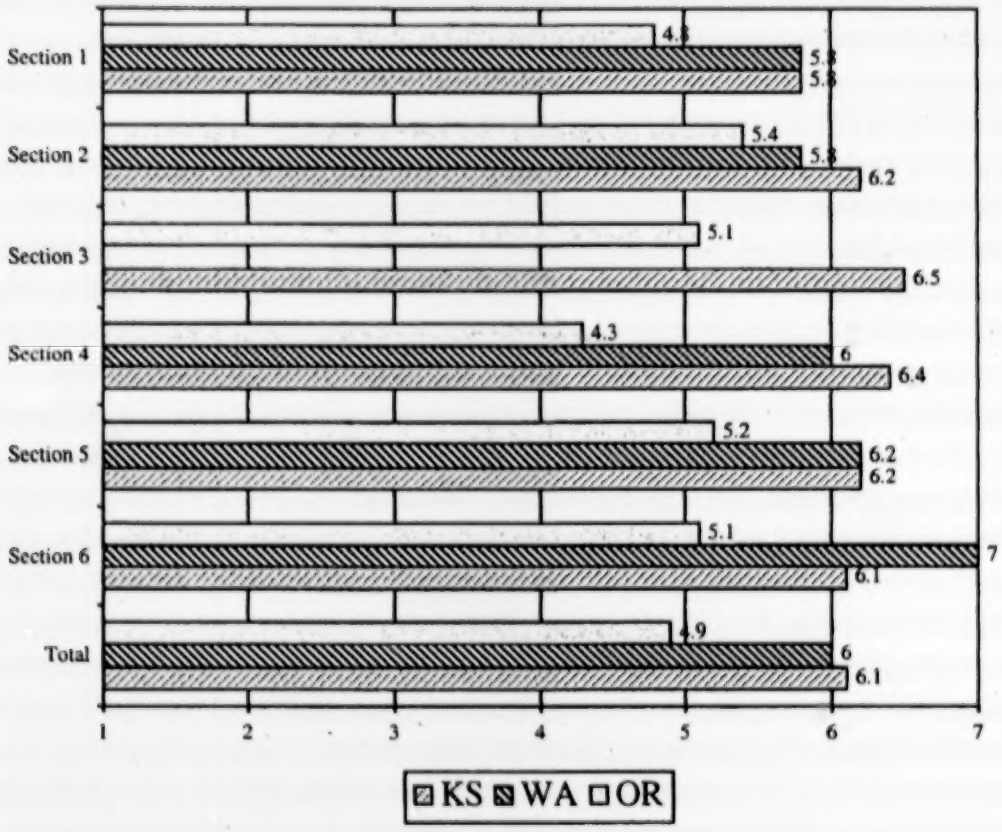
Section 3: How satisfied are you with the way your special education teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the teachers of your required academic classes (science, history, math, English)?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 4. Students with Disabilities Satisfaction Questionnaire for Rural Schools



Questions for SWD Satisfaction

Section 1: How satisfied are you with your special education teachers?

Section 2: How satisfied are you with the way your special education teachers communicate with your parents?

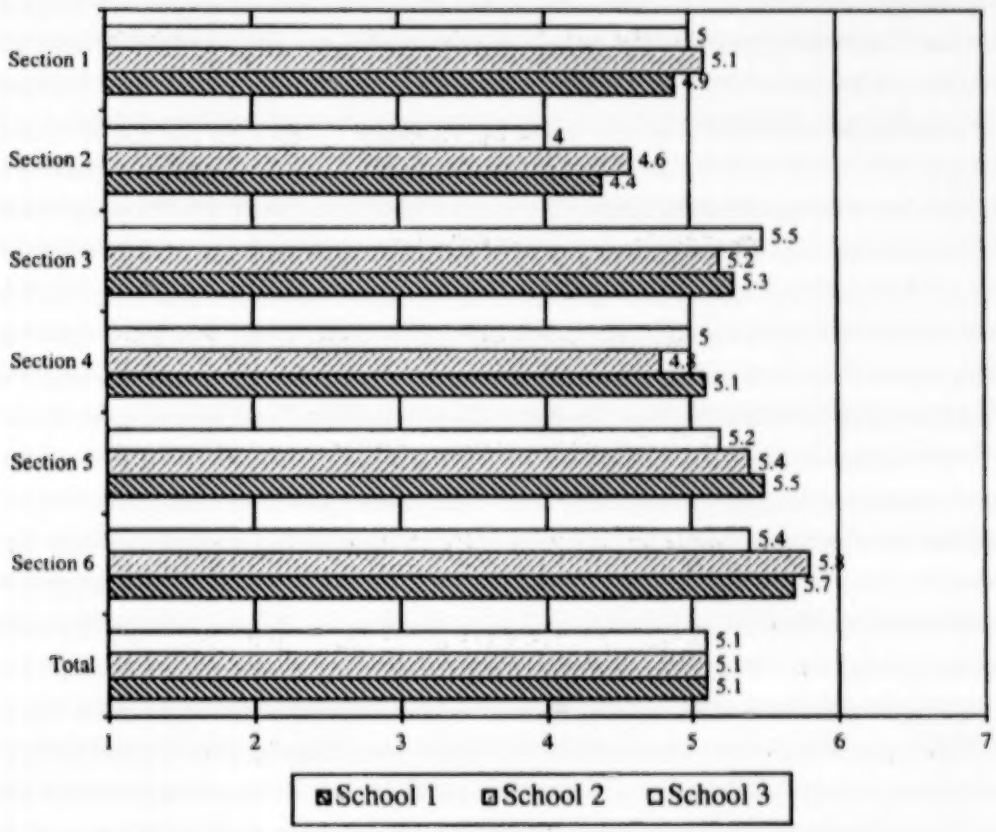
Section 3: How satisfied are you with the way your special education teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the teachers of your required academic classes (science, history, math, English)?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 5. Students with Disabilities Satisfaction Questionnaire for Suburban Schools



Questions for NA Satisfaction

Section 1: How satisfied are you with the way your teachers of required academic classes (English, math, science, history) assist you?

Section 2: How satisfied are you with your teachers and your parents?

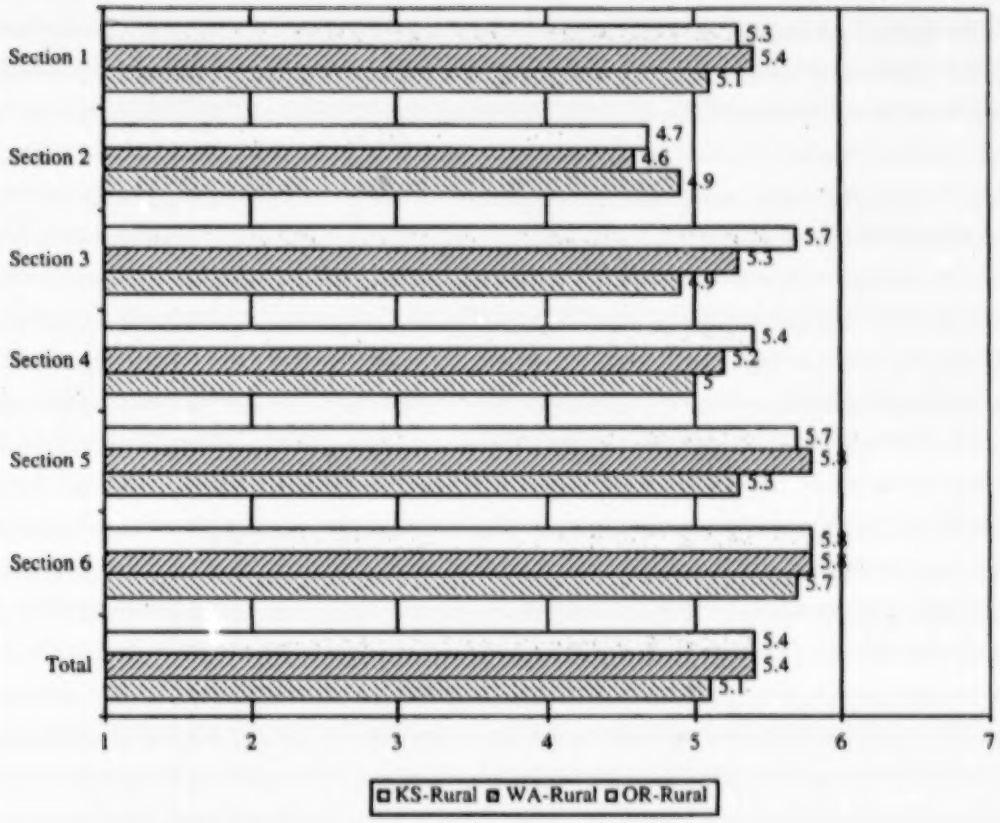
Section 3: How satisfied are you with the way your teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the way the teachers of your required academic classes (science, history, math, English) teach you?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 6. Normal Achieving Student Satisfaction Questionnaire for Urban Schools



Questions for NA Satisfaction

Section 1: How satisfied are you with the way your teachers of required academic classes (English, math, science, history) assist you?

Section 2: How satisfied are you with your teachers and your parents?

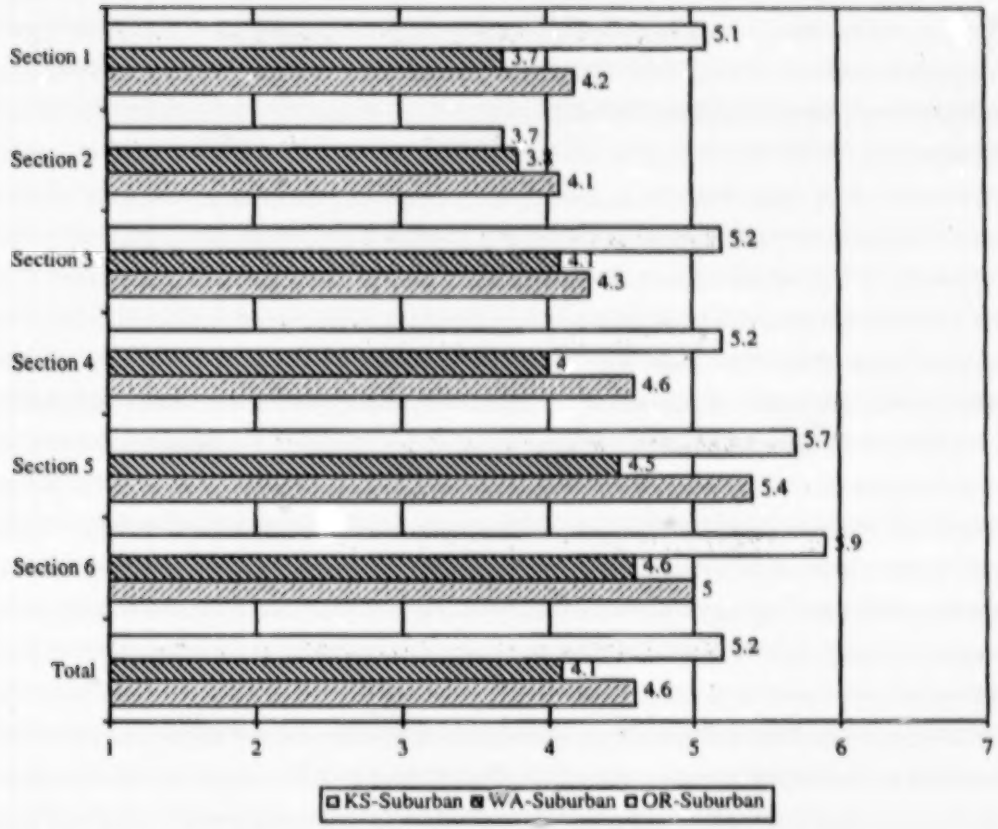
Section 3: How satisfied are you with the way your teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the way the teachers of your required academic classes (science, history, math, English) teach you?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 7. Normal Achieving Student Satisfaction Questionnaire for Rural Schools



Questions for NA Satisfaction

Section 1: How satisfied are you with the way your teachers of required academic classes (English, math, science, history) assist you?

Section 2: How satisfied are you with your teachers and your parents?

Section 3: How satisfied are you with the way your teachers are helping you prepare for life after high school graduation?

Section 4: How satisfied are you with the way the teachers of your required academic classes (science, history, math, English) teach you?

Section 5: How satisfied are you with your required academic classes (science, history, math, English)?

Section 6: How satisfied are you with your overall high school experience?

Figure 8. Normal Achieving Student Satisfaction Questionnaire for Suburban Schools

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
X	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").